

Technical Bulletin

OS/390 Version 2 Release 6 Operating System Upgrade

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Section/Groups: Systems Support
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Effective **Saturday, April 17, 1999** the operating systems on CPU5 and CPU6 are scheduled to be upgraded from OS/390 Version 1, Release 3 to OS/390 Version 2, Release 6. This will be the System software that will carry the State through the year 2000.

The Salt Lake City site (CPUs 2, 3 and 4) are scheduled to be upgraded to the same level on **Sunday, May 16, 1999**.

JES2 will be upgraded from OS/390 Version 1, Release 3 to OS/390 Version 2, Release 5; ISPF from 4.4 to 4.5; VTAM from 4.4 to 4.5; TSO from 2.5 to 2.6; TCPIP from 3.2 to 3.5; DFHSM from 1.3 to 1.4; and, SDSF from 1.7 to 1.9.

Maintenance also will be applied to the following OS/390 software support products:

- C LE370 Runtime Libraries
- C High Level Assembler

Issues Concerning OS/390 R2.6 and TN3270 Emulators

Some background is needed to understand what is going to happen with the implementation of OS/390 R2.6 on the mainframes at the State of Utah, and its impact on users that access the Mainframe by the use of a 3270 Emulator.

The original access to the mainframe was via a family of IBM (or IBM Compatible) devices known as 3270s. These individual machines connect to the mainframes via a co-axial cable connection. With the advent of desktop PCs, and their ability to use multiple software packages, the ability to “emulate” a 3270 machine became a viable way to connect to the mainframe. The early versions of these PC-based “emulators” still used the co-axial cable to make the physical connection to the mainframe.

The development of LANs (Local Area Networks), and WANs (Wide Area Networks), and

various other “network” type of connections, made it possible to have the physical connection to the mainframe be by (or through) the “network.” This included the use of the Internet to make the connection. These “emulator” connections were (and still are) called TN3270 connections, or sessions. With this development, came the necessity for some “standards” to exist for the protocols used. These connections did not use a co-axial cable for the connection, by rather used whatever the “network” used (Ethernet, Token Ring, 10baseT, etc.).

The current “standard” for these emulators is described in a document titled “RFC1647 TN3270.” This is an evolving standard (i.e., it will be somewhat different two years from now). For instance, several years ago there was no need for a description of what a TN3270E Emulator was, because there wasn’t one.

Now the problem: For some time now ITS has been establishing a production environment on the mainframe that is Y2K compliant. Our goal is to have all mainframe system software and hardware installed on the production systems prior to July 1, 1999. At that time, ITS intends to impose a “new installation freeze.” The scope of that freeze will consist of the support hardware and software for the mainframes for which DAS/ITS has responsibility.

ITS must upgrade to the OS/390 R2.6 MVS operating system in order to be at the production level that will move us into year 2000. As most of you are aware, preparing for January 1, 2000 is a top priority for all of State government.

The version of TCP/IP that is supplied with OS/390 R2.6 is written to the RFC1647 TN3270 standard. (This document can be found on the Internet at URL: <http://www.strategis.com/rfc/RFC16XX/RFC1647.TXT>.) Emulators that use TCP/IP to connect to the mainframe must conform to this standard or they will not be able to establish a connection. ***Not All Emulators Currently in Use on PC-based Desktops Conform to this Standard.***

This means that when the mainframes are converted to OS/390 R2.6, some of the emulators now in use at various locations within the state, will cease to function, or will function erratically, or fail in some other as yet undetermined way! This conversion of the mainframes to OS/390 R2.6 is scheduled for mid-April for the Richfield site, and mid-May for the Salt Lake site.

This means that ***All*** users accessing the mainframe should test their emulators to determine if they conform to this new standard! If it is known that the emulator does not conform, it ***MUST*** be replaced by one that does. If it is unknown whether it conforms, there are procedures to test it in advance of the conversion date, but the user will have to initiate the process, since ITS does not know what emulators are in use, or whether they conform (in most cases).

In the current marketplace, there are many TN3270 Emulators available. ITS knows of some of them, but by no means all of them. The users must bear the burden of ensuring compatibility with the new standard by contacting ITS to initiate the testing procedure.